

Science, Grades 4, 8, and 11

Chart 1: 4, 8, 11 SC

The chart below shows the National Percentile Ranks for grades 4, 8, and 11.

- In 2001, grade 4 scored an NPR of 71%, grade 8 an NPR of 64%, and grade 11 an NPR of 70%.
- The 2002 NPR for grade 4 dropped slightly to 69% while the grade 11 increased slightly. Grade 8 scores remained the same as 2001.
- In 2003, the NPR for grades 4 and 11 increased slightly while remaining the same for grade 8.

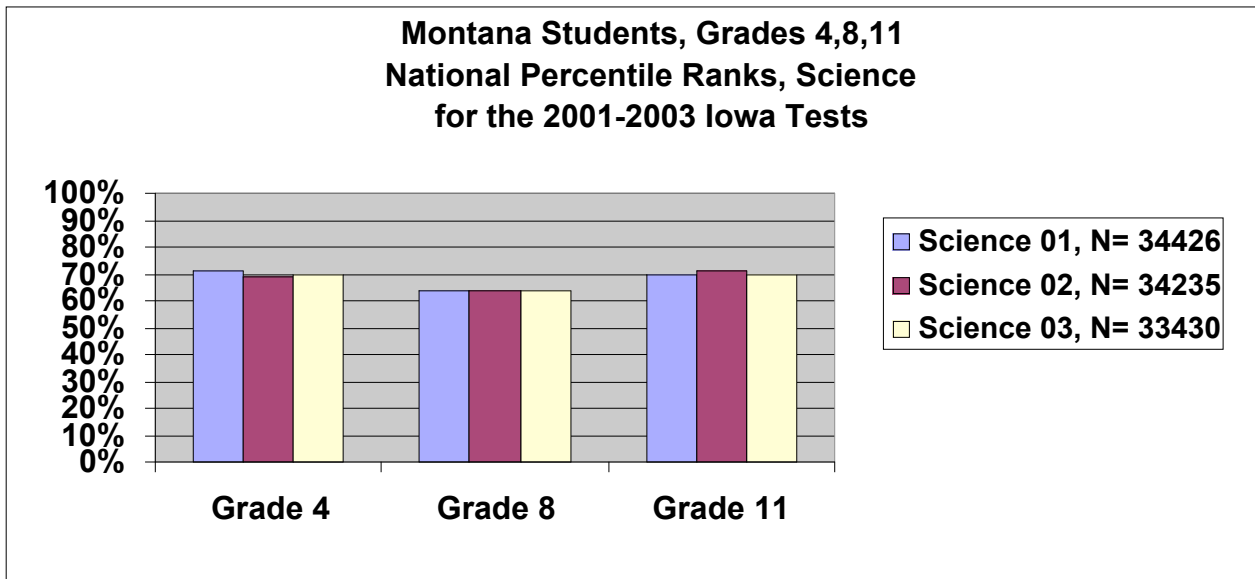


Table 1: 4, 8, 11 SC

Science National Percentile Rank for each disaggregation across Montana in 2001, 2002, and 2003.

Groups	Grade 4			Grade 8			Grade 11		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
All Students	71%	69%	70%	64%	64%	64%	70%	71%	70%
Students Without Disabilities	72%	71%	72%	67%	68%	67%	72%	73%	73%
Students With Disabilities	50%	46%	51%	36%	34%	35%	32%	34%	34%
Female Students	70%	68%	70%	65%	66%	66%	72%	73%	73%
Male Students	72%	70%	70%	63%	63%	62%	67%	68%	68%
Native American Students	50%	49%	48%	42%	41%	43%	51%	48%	46%
White Students	73%	72%	73%	67%	68%	67%	71%	72%	73%
Students on Free/Reduced Lunch	59%	58%	60%	53%	53%	52%	58%	58%	59%
LEP*	Na	35%	33%	Na	32%	29%	Na	40%	41%

* LEP 2001 data were incomplete.

Table 2: 4, 8, 11 SC

Science: The table below shows the percentage of students for each disaggregation scoring in each performance category in grades 4, 8, and 11 for 2001, 2002, and 2003.

Groups		Grade 4				Grade 8				Grade 11			
		Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3
All Students	2001	22%	60%	10%	8%	18%	60%	12%	10%	21%	60%	9%	10%
	2002	21%	60%	10%	9%	18%	59%	12%	11%	23%	58%	9%	10%
	2003	22%	60%	10%	8%	17%	60%	12%	11%	22%	59%	9%	10%
Students Without Disabilities	2001	24%	61%	9%	7%	20%	62%	11%	7%	22%	62%	8%	8%
	2002	22%	61%	10%	7%	19%	62%	11%	8%	25%	60%	7%	8%
	2003	23%	61%	9%	7%	19%	62%	11%	8%	24%	61%	8%	8%
Students With Disabilities	2001	8%	53%	20%	19%	3%	37%	24%	37%	2%	39%	21%	38%
	2002	6%	51%	20%	23%	3%	34%	25%	38%	2%	39%	23%	36%
	2003	8%	53%	20%	19%	2%	39%	23%	36%	3%	39%	22%	36%
Female Students	2001	21%	61%	10%	8%	16%	65%	11%	8%	21%	64%	8%	7%
	2002	19%	62%	11%	8%	17%	63%	11%	9%	23%	62%	8%	7%
	2003	21%	62%	10%	7%	17%	63%	12%	8%	22%	63%	8%	7%
Male Students	2001	24%	59%	9%	8%	20%	55%	12%	12%	21%	57%	10%	12%
	2002	22%	58%	11%	9%	18%	56%	13%	13%	23%	55%	9%	13%
	2003	22%	59%	10%	9%	17%	57%	13%	13%	22%	55%	10%	13%
Native American Students	2001	8%	52%	20%	20%	4%	46%	21%	29%	7%	55%	18%	19%
	2002	6%	55%	20%	19%	4%	44%	24%	28%	7%	57%	13%	23%
	2003	6%	52%	21%	21%	5%	48%	21%	25%	6%	54%	17%	23%
White Students	2001	20%	60%	18%	2%	20%	62%	11%	8%	22%	61%	8%	9%
	2002	23%	62%	8%	7%	20%	62%	10%	8%	25%	59%	7%	9%
	2003	24%	61%	9%	6%	19%	62%	11%	8%	24%	59%	8%	8%
Students on Free/Reduced Lunch	2001	14%	52%	18%	16%	8%	55%	18%	18%	11%	59%	14%	16%
	2002	12%	60%	14%	14%	8%	55%	18%	19%	13%	58%	12%	17%
	2003	12%	61%	15%	13%	8%	55%	18%	19%	12%	60%	12%	16%
LEP*	2001	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	2002	1%	46%	24%	29%	1%	33%	30%	36%	4%	49%	16%	31%
	2003	2%	38%	27%	33%	0%	32%	24%	44%	2%	52%	18%	27%

*LEP 2001 data were incomplete.

Table 3: 4, 8, 11 SC

Customized Skills Reports: Montana Science Standards tested in the 2001, 2002, and 2003 Iowa Tests

Standard			Design, conduct, evaluate and communicate investigations	Understand physical and chemical systems	Understand the structures and functions of living things	Understand Earth’s systems and interactions	Understand the impact of science and technology on society
Grade 4	# of Items	01	19	5*	10	8	2*
		02	19	5*	10	8	2*
		03	19	5*	10	8	2*
	Percent Correct	01	60%	69%	67%	67%	58%
		02	60%	68%	66%	66%	58%
		03	61%	67%	66%	68%	57%
Grade 8	# of Items	01	28	14	7	8*	3*
		02	28	14	7	8*	3*
		03	28	14	7	8*	3*
	Percent Correct	01	68%	65%	59%	59%	55%
		02	67%	65%	58%	59%	55%
		03	67%	65%	58%	58%	54%
Grade 11	# of Items	01	45	9*	5*	1*	1*
		02	45	9*	5*	1*	1*
		03	45	9*	5*	1*	1*
	Percent Correct	01	56%	53%	59%	64%	61%
		02	57%	53%	59%	63%	60%
		03	56%	53%	59%	64%	61%
* The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.							

Tables 4a and 4b: 11 SC

ACT Science Reasoning results for the high school graduating classes of 2001, 2002, and 2003.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score Native American Montana
2001	21.0	21.9	22.1	18.4
2002	20.8	21.8	21.9	18.25
2003	20.8	21.7	22.0	18.5

Number of Montana students participating in the ACT

	Total Montana Students	White Montana	Native American Montana
2001	6,641	5,699	319
2002	6,368	5,460	300
2003	6,470	5,514	282

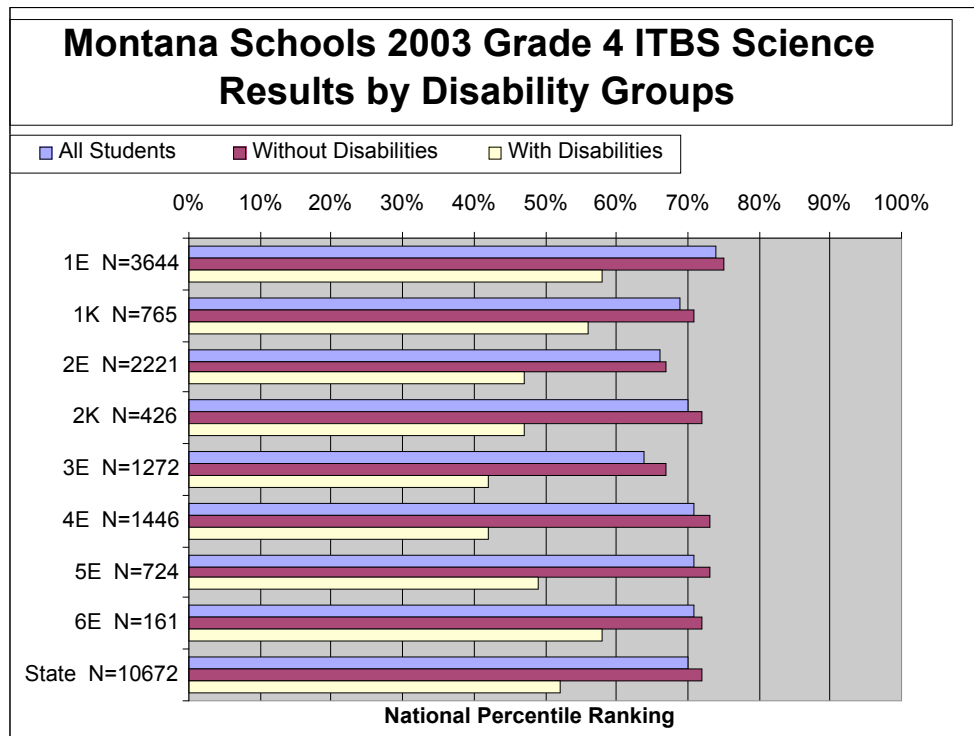
Table 5: 4, 8, 11 SC

NAEP data from 1994 and 1998 are included to add the picture of student achievement in Science. Although NAEP data give another perspective to the picture of Montana students in grades four and eight tested in 1994 and 1998, these are not the same 4th and 8th grade students measured in the 2002 statewide assessment.

With the scores of Montana White and Montana Native American students are percent of students who scored basic or above. It should be noted that the number of White students tested is considerably larger and therefore, generalizations are safer. For example, in the 2000 grade 8 test, 1,448 Montana White students and 129 Montana Native American students were included in the testing sample.

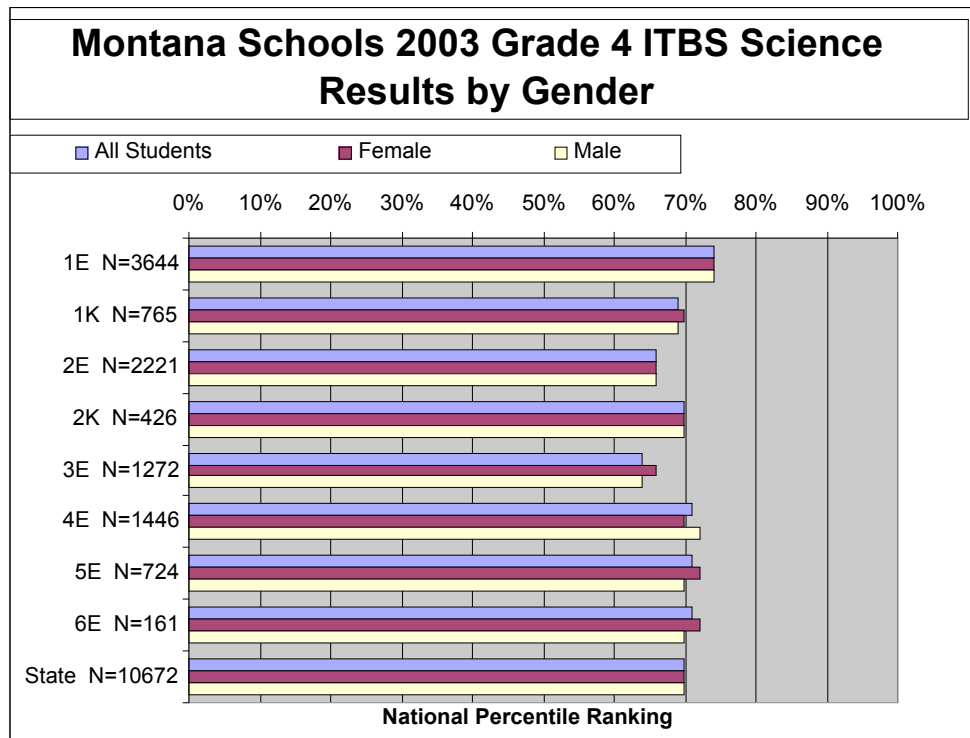
	Average Score					
Grade:Year	All National	White National	Native American National	All Montana	White Montana	Native American Montana
4: 2000	150	160	140	160	164 (86%)	145 (63%)
8: 1996	150	159	148	162	166 (83%)	139 (44%)
8: 2000	151	162	134	165	168 (84%)	143 (49%)

Chart 4.1 SC



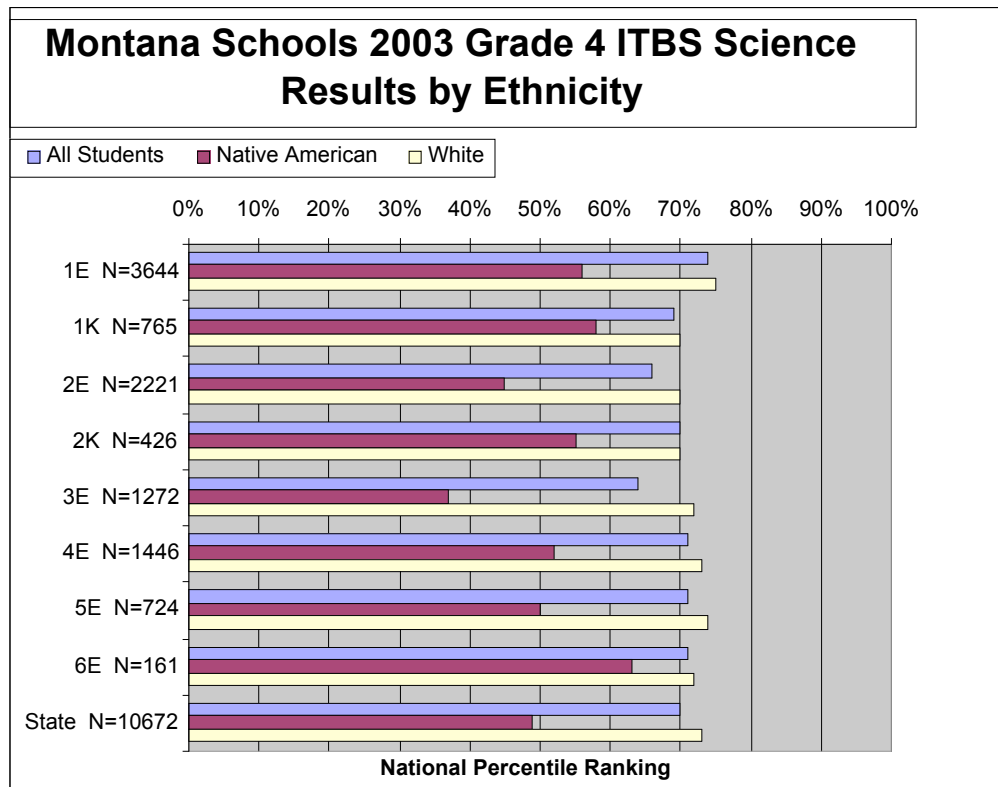
1. All students
 - The Science NPR for all Montana grade 4 students is 70%, one percentage point above 2002.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 72%, one percentage point above 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 51%, five percentage points above 2002. That number is relatively stable across the state with most district size categories plus or minus 4-6 percentage points.
4. Comparisons
 - Statewide, Montana students without disabilities scored 21 percentage points above students with disabilities, 72% and 51% respectively. That number is relatively stable.

Chart 4.2 SC



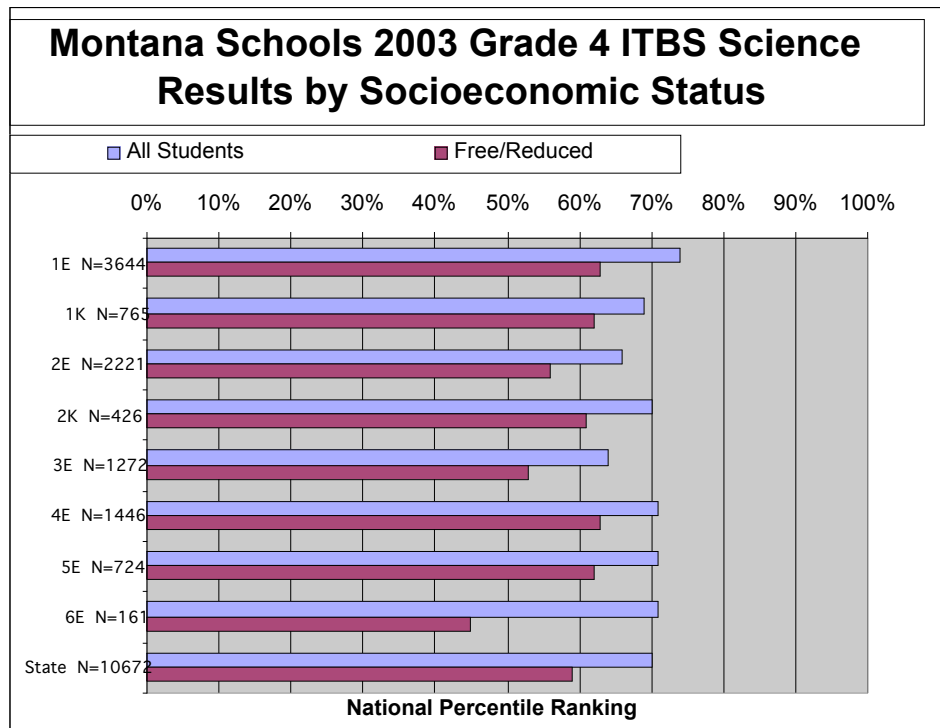
1. All students
 - The Science NPR for all Montana grade 4 students is 70%.
2. Female students
 - Statewide, the NPR for female students is 70%, two percentage points above 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is the same as in 2002, 70%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, there is no percentage point difference in science for Montana male and female students.

Chart 4.3 SC



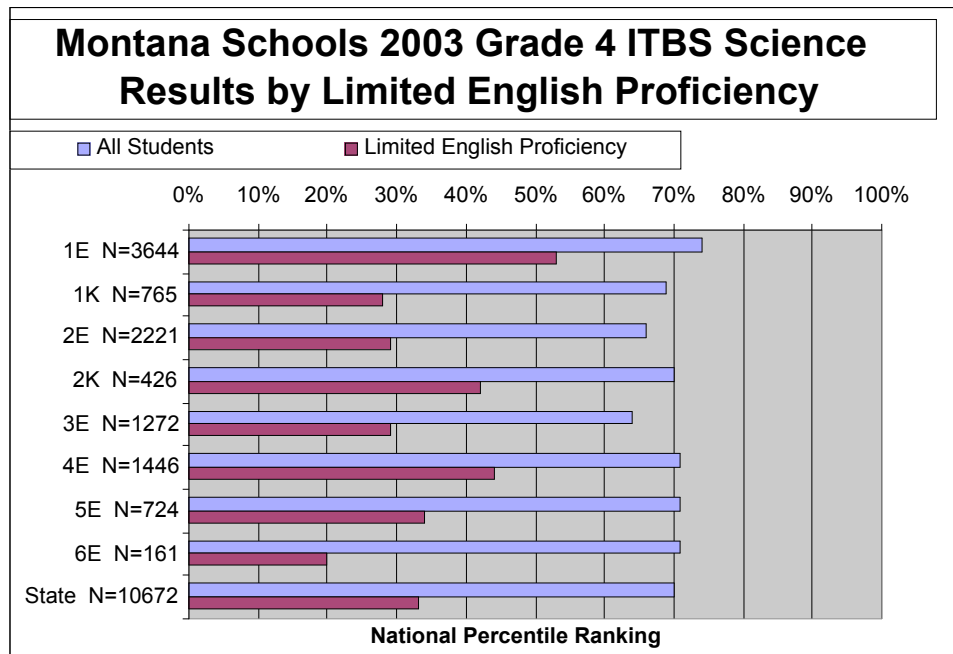
1. All students
 - The Science NPR for all Montana grade 4 students is 70%.
2. Native American students
 - Statewide, the NPR for Native American students is 48%, one percentage point below 2002. That number is relatively stable across the state with most district size categories plus or minus 4-6 percentage points except 6E where the number of students tested is too small for comparisons.
3. White students
 - Statewide, the NPR for White students is 73%, one percentage point above 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, White students scored 25 percentage points above Native American students, 73% and 48% respectively. That number is relatively stable.

Chart 4.4 SC



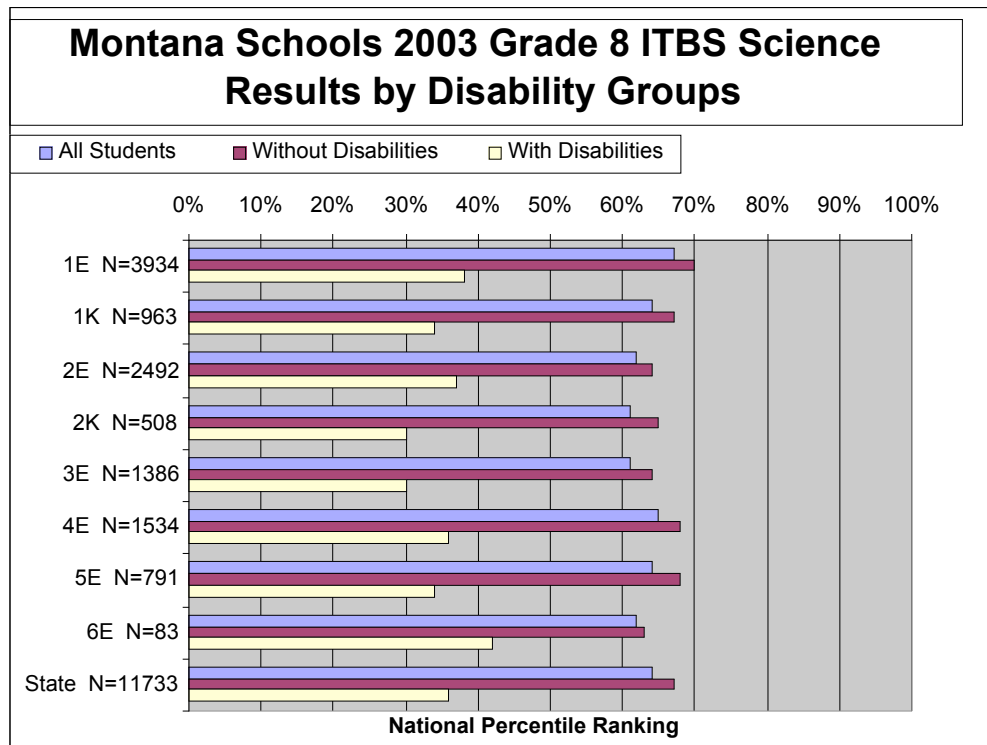
1. All students
 - The Science NPR for all Montana grade 4 students is 70%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 60%, one percentage point above 2002. That number is stable with all district size categories plus or minus 2-4 points except 6E where the number of participating students tested is too small for comparisons.
3. Comparisons
 - Statewide, all Montana students scored ten percentage points above participating students, 70% and 60% respectively.

Chart 4.5 SC



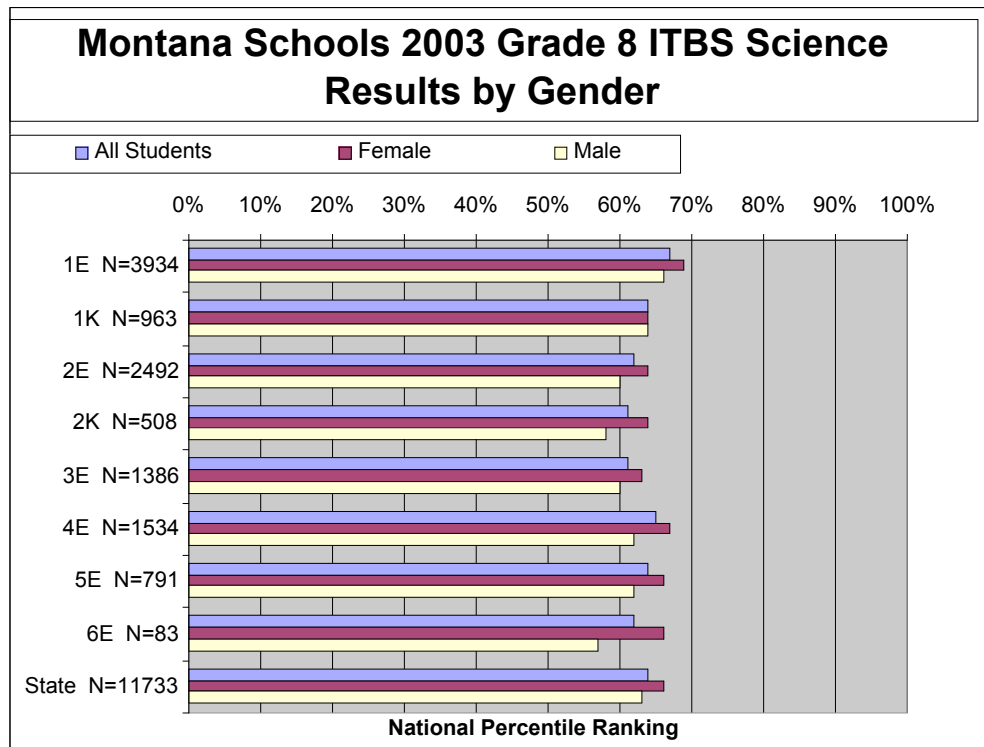
1. All students
 - The Science NPR for all Montana grade 4 students is 70%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 33%, two percentage points below 2002. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 33 percentage points higher than limited English proficient students, 70% and 33% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.

Chart 8.1 SC



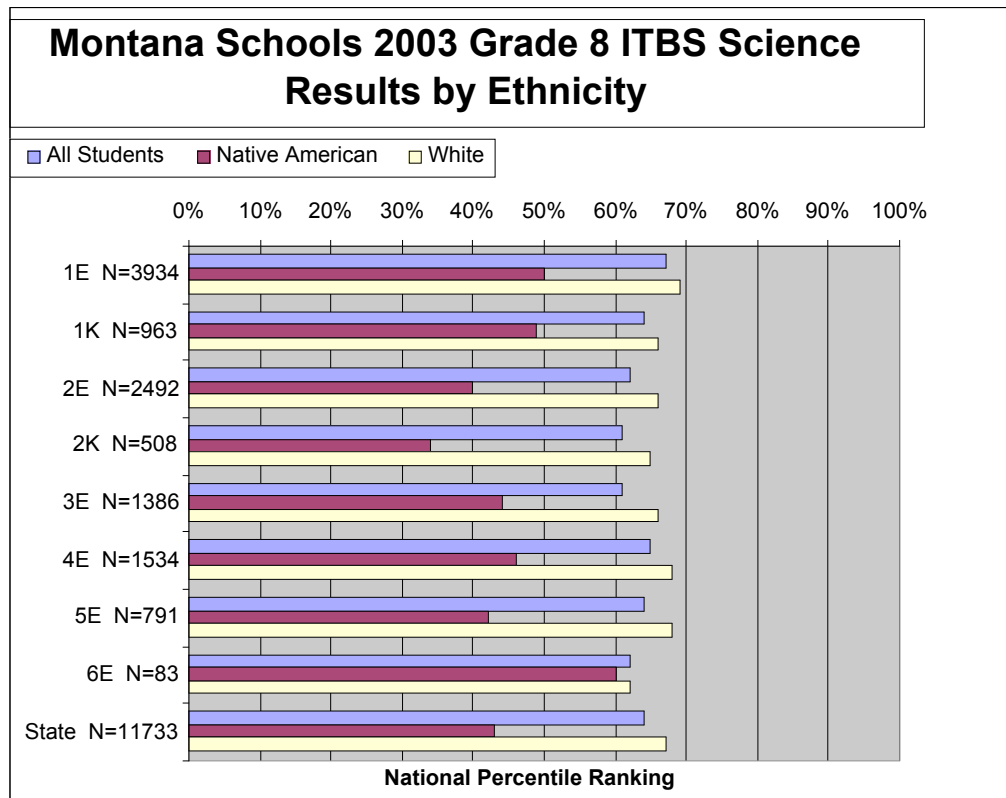
1. All students
 - The Science NPR for all Montana grade 8 students is the same as in 2002, 64%.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 67%, one percentage point below 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide the NPR for students with disabilities is 35%, one percentage point above 2002. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
4. Comparisons
 - Statewide, Montana students without disabilities scored 32 percentage points above students with disabilities, 67% and 35% respectively.

Chart 8.2 SC



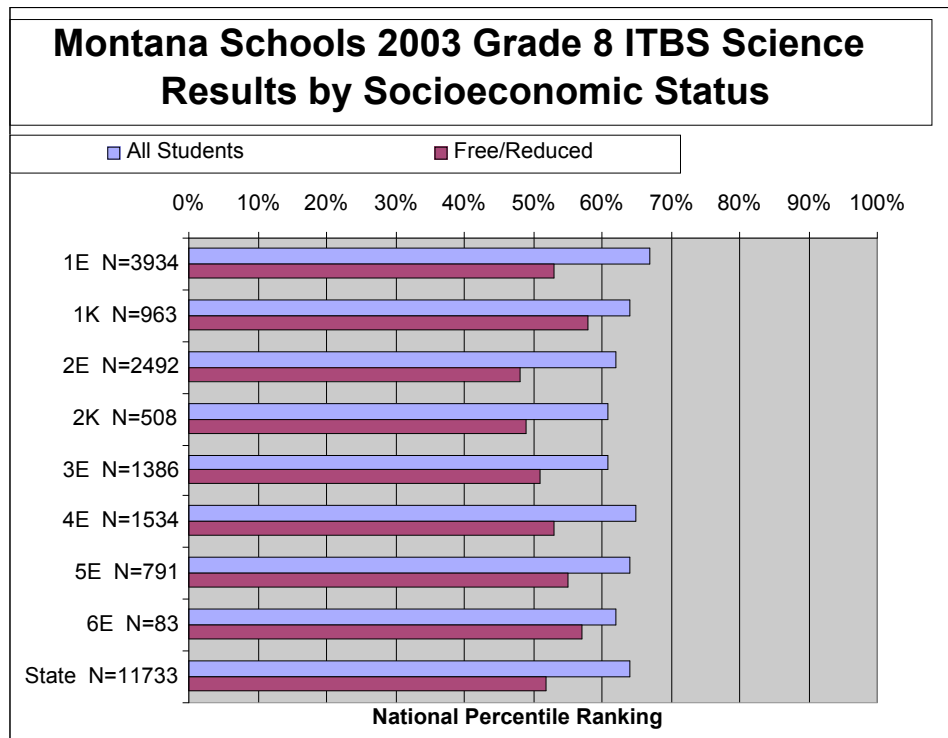
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Female students
 - Statewide, the NPR for female students is the same as in 2002, 66%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is the 62%, one percentage point below 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, female students scored four percentage points above male students. 66% and 62% respectively.

Chart 8.3 SC



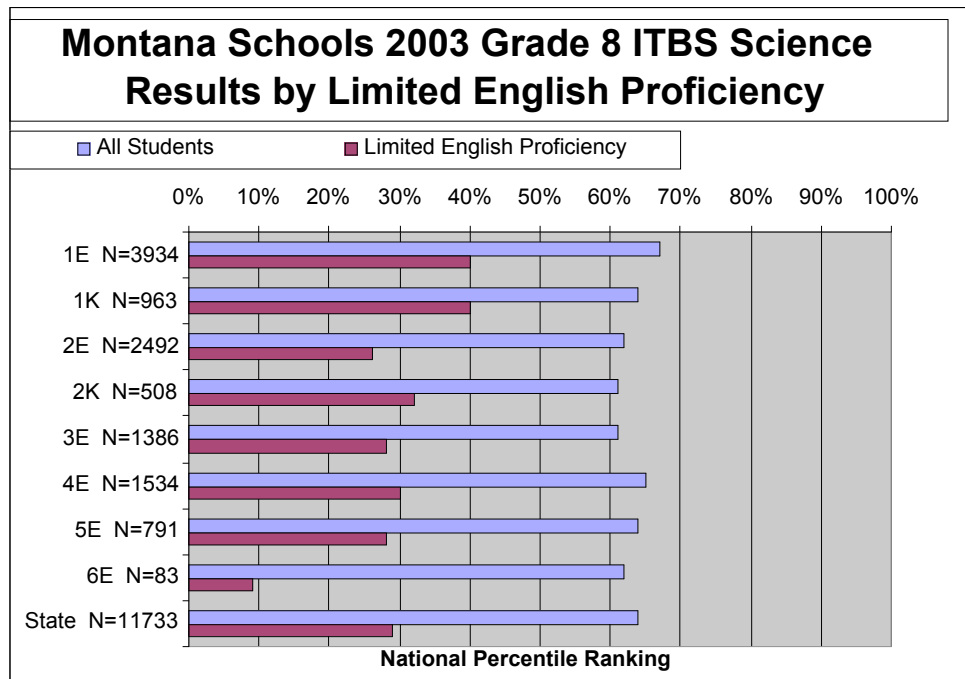
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Native American students
 - Statewide, the NPR for Native American students is 43%, two percentage points above 2002. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
3. White students
 - Statewide, the NPR for White students is 67%, one percentage point below 2002. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
 - Statewide, Montana White students scored 24 percentage points above Native American students, 67% and 43% respectively.

Chart 8.4 SC



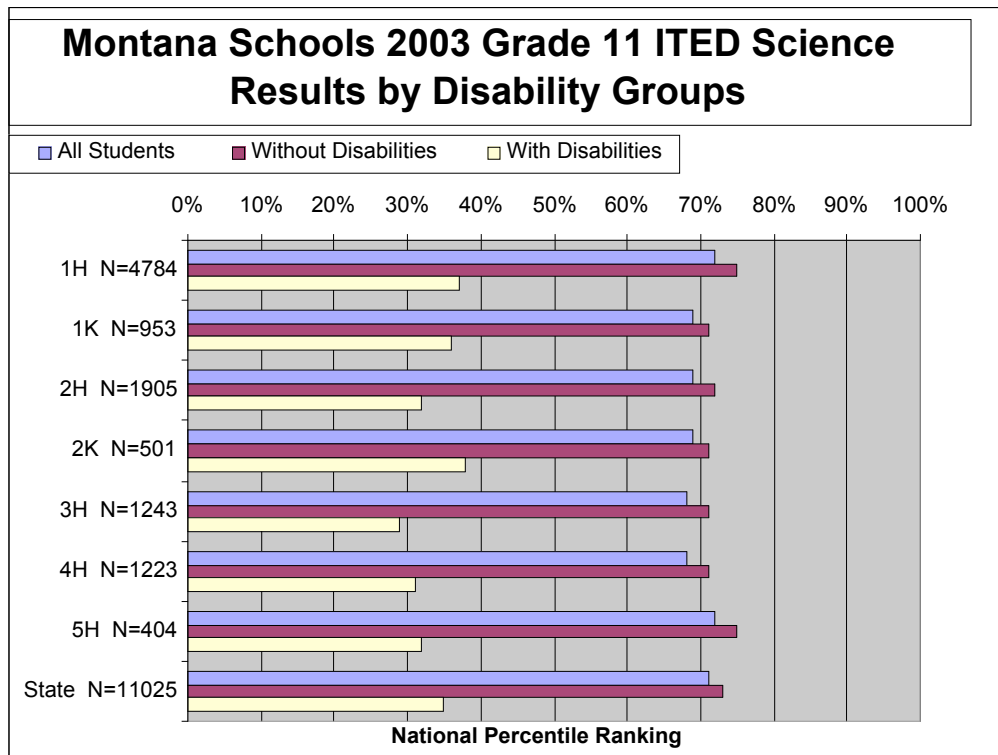
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 52%, one percentage point below 2002. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 6E where the number of students tested is too small for comparisons.
3. Comparisons
 - Statewide, all Montana students scored twelve percentage points above students participating, 64% and 52% respectively.

Chart 8.5 SC



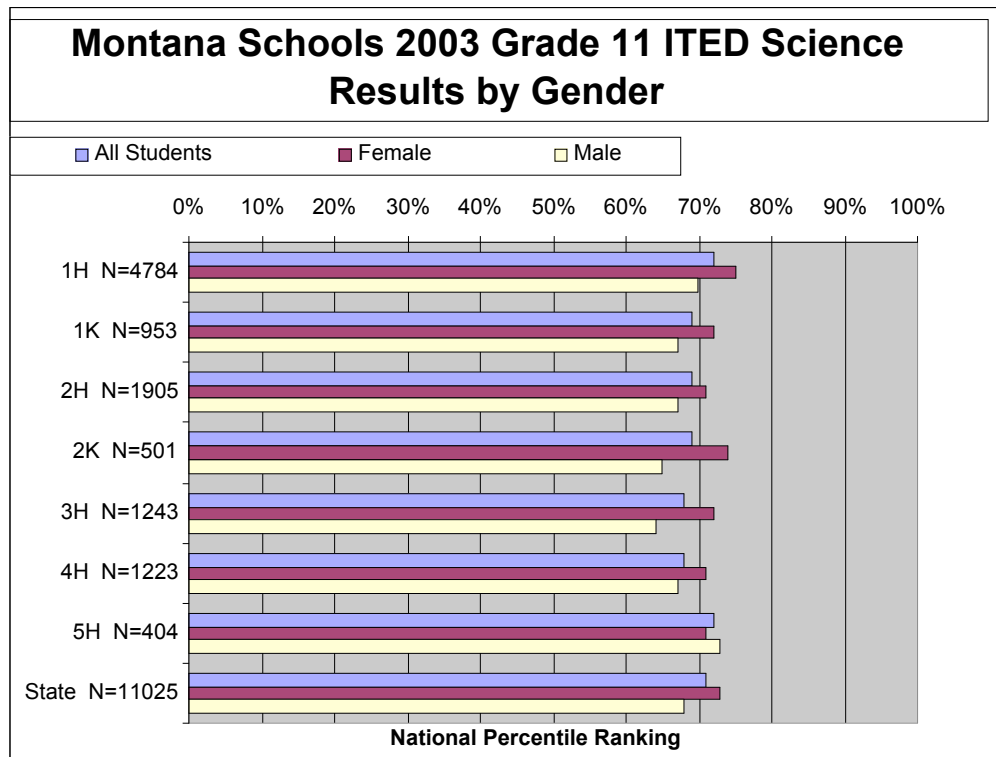
1. All students
 - The Science NPR for all Montana grade 8 students is 64%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 29%, three percentage points below 2002. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 35 percentage points higher than limited English proficient students, 64% and 29% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.

Chart 11.1 SC



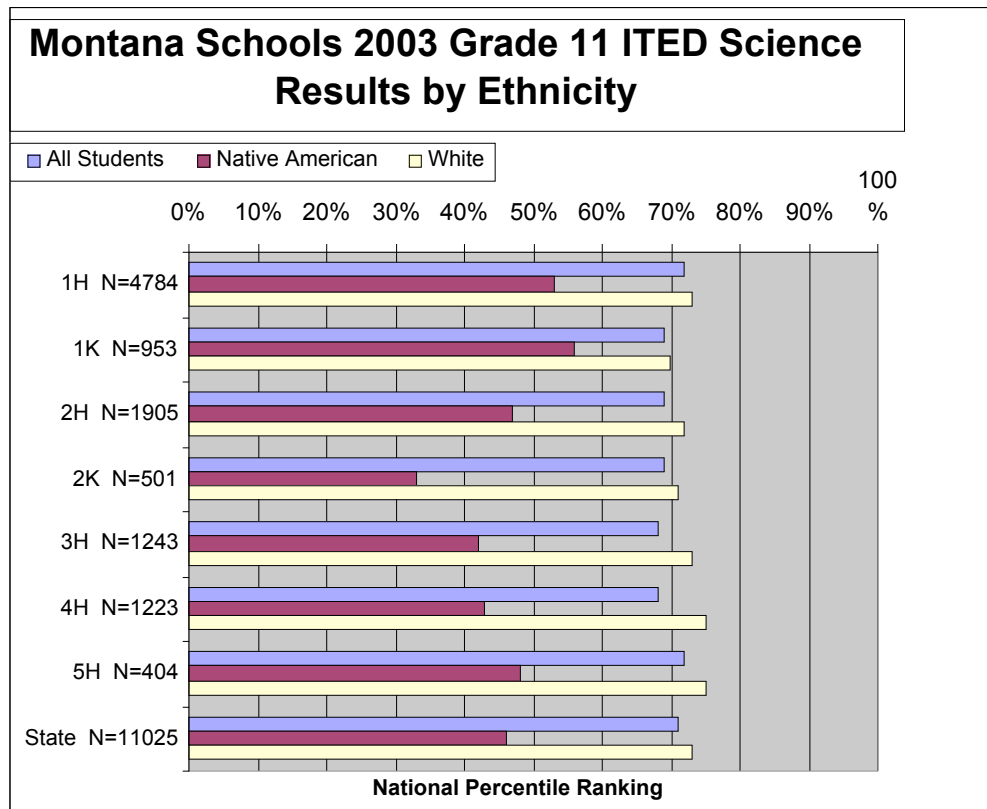
1. All students
 - The Science NPR for all Montana grade 11 students is 70%, one percentage point below 2002.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is the same as in 2002, 73%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
 - Statewide the NPR for students with disabilities is 34%, one percentage point above 2002. That number is stable across the state.
4. Comparisons
 - Statewide, students without disabilities scored 39 percentage points above students with disabilities, 73% and 34% respectively.

Chart 11.2 SC



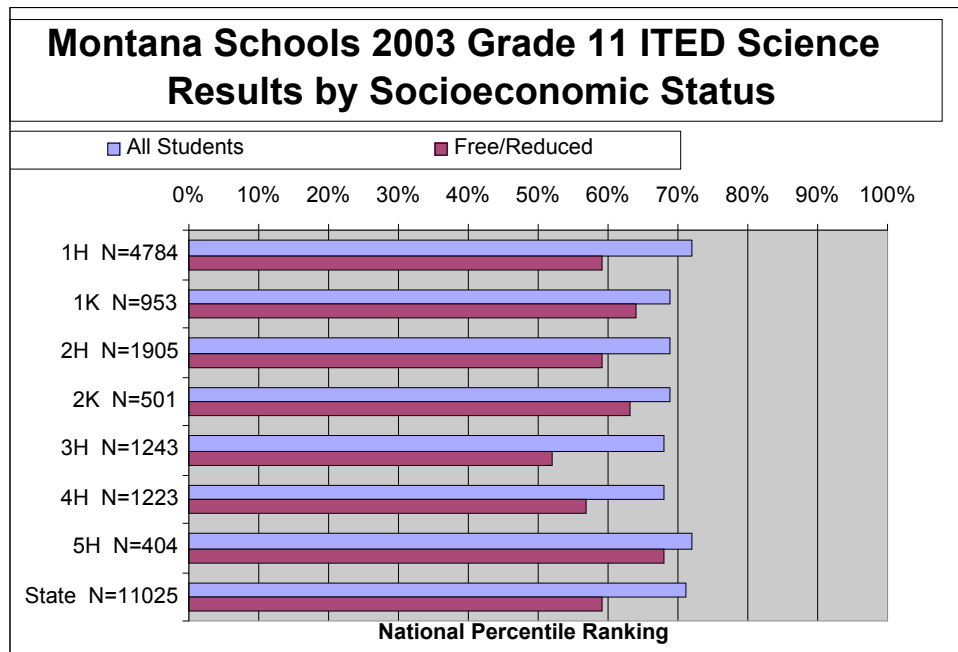
1. All students
 - The Science NPR for all Montana grade 11 students is 70%.
2. Female students
 - Statewide, the NPR for female students is the same as in 2002, 73%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
 - Statewide, the NPR for male students is the same as in 2002, 68%. That number is stable across the state with all district size categories plus or minus 2-5 percentage points.
4. Comparisons
 - Statewide, female students scored five percentage points above male students, 73% and 68% respectively.

Chart 11.3 SC



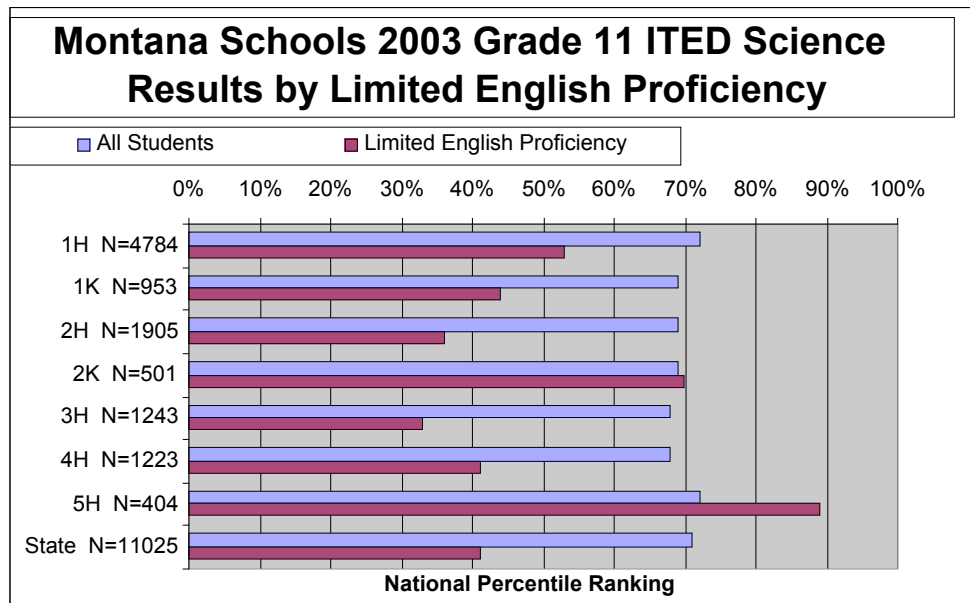
1. All students
 - The Science NPR for all Montana grade 11 students is 70%.
2. Native American students
 - Statewide, the NPR for Native American students is 46%, two percentage points below 2002. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except in size categories 1H and 1K where the number of students tested is too small for comparisons.
3. White students
 - Statewide, the NPR for White students is 73%, one percentage point above 2002. That number is stable.
4. Comparisons
 - Statewide, Montana White students scored 27 percentage points above Native American students, 73% and 46% respectively. That number is relatively stable.

Chart 11.4 SC



1. All students
 - The Science NPR for all Montana grade 11 students is 70%.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 59%, one percentage point above 2002. That number is relatively stable with most district size categories plus or minus 2-4 percentage points except 5H where the number of participating students tested is too small for comparisons.
3. Comparisons
 - Statewide, all Montana students scored eleven percentage points above participating students, 70% and 59% respectively. That number is relatively stable.

Chart 11.5 SC



1. All students
 - The Science NPR for all Montana grade 11 students is 70%.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 41%, one percentage point above 2002. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
 - Statewide, all Montana students scored 29 percentage points higher than limited English proficient students. That number varies among school size categories because of the wide variation in the number of LEP students tested.